DOCUMENT RESUME

ED 428 712 IR 019 373

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TITLE	Computer-Mediated Communication in Continuing Professional Education: A Guarded Appraisal.
PUB DATE	1998-06-00
NOTE	7p.; In: ED-MEDIA/ED-TELECOM 98 World Conference on Educational Multimedia and Hypermedia & World Conference on Educational Telecommunications. Proceedings (10th, Freiburg, Germany, June 20-25, 1998); see IR 019 307.
PUB TYPE	Reports - Descriptive (141) -- Speeches/Meeting Papers (150)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	Accounting; *Certified Public Accountants; Computer Assisted Instruction; *Computer Mediated Communication; *Distance Education; Foreign Countries; Higher Education; *Professional Continuing Education; Professional Development; Use Studies
IDENTIFIERS	Deakin University (Australia); Technology Role

ABSTRACT

Deakin Australia, the commercial arm of Deakin University, has included computer-mediated communication (CMC) as an element of the professional development program produced in conjunction with the Australian Society of Certified Practising Accountants (ASCPA). The CPA program is delivered by distance education to candidates seeking professional accreditation as Certified Practising Accountants (CPAs). For a number of reasons, the use of CMC to date has been disappointing. The role of CMC in the CPA program is being reviewed in light of this experience. This paper discusses the history of, and future plans for, CMC in the CPA program. The first section describes the CPA Program and introduces the use of CMC in the program. Deakinet, the initial CMC system used in the program, is described in the second section, as well as its failure and the replacement World Wide Web page, which also drew disappointing results. The third section outlines the pedagogical functions able to be filled by CMC, and the change in attitude toward CMC brought on by the results of its use at Deakin Australia. The final section summarizes the future of CMC in the CPA Program, including information, update, and tutorial service options. Contains 10 references. (Author/DLS)

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Computer-Mediated Communication in Continuing Professional Education: A Guarded Appraisal

ED 428 712

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Abstract: Deakin Australia, the commercial arm of Deakin University, has included computer-mediated communication as an element of the professional development program produced in conjunction with the Australian Society of Certified Practising Accountants (ASCPA). The CPA Program is delivered by distance education to candidates seeking professional accreditation as Certified Practising Accountants. For a number of reasons the use of CMC to date has been disappointing. The role of CMC in the CPA Program is being reviewed in light of this experience. This paper discusses the history of, and future plans for, CMC in the CPA Program.

Introduction

Computer-mediated communication (CMC) represents a potentially rich enhancement to education and training programs, particularly those offered through distance education. The opportunity for asynchronous (and synchronous) interaction using textual communication enables participation in group dialogue and collaborative project work which is quite distinct from equivalent face-to-face communication. These and other strengths of CMC have been documented widely. See, for instance, [Harasim 1989] or [Kaye 1989].

Deakin Australia has introduced CMC into continuing professional educational programs with mixed results. This paper briefly outlines Deakin Australia's experience to date using CMC and explores possible strategies for future application of online education techniques.

The Provision of Continuing Professional Education

Deakin Australia, the commercial arm of Deakin University, provides education and training programs in collaboration with clients from professional associations, government agencies and the corporate sector. Continuing professional development programs are offered, by distance education, in conjunction with a range of professional associations including the Australian Society of Certified Practising Accountants (ASCPA). Candidates in these programs are typically young graduates in full-time employment who are seeking accreditation as full members of their respective professional associations.

The Accounting Society's CPA Program has the following main features:

- Two core and three elective semester units of study ('segments') are to be completed.
- Assessment occurs via invigilated, end-of-semester, multiple-choice-question examinations.
- Distance learning is the mode of delivery.
- A combination of study media and support mechanisms is used, including:
  - printed study manual (the main learning resource)
  - audio cassettes

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- CBE via floppy disk
- face-to-face workshops in the larger urban locations
- WWW-page information service and study forum
- academic and administrative support from ASCPA education staff via telephone/fax/email links.

- 22 300 people enrolled in the Program for 1997, generating approximately 16 000 segment enrolments per semester - a much larger enrolment than many university faculties.

- The enrolment pattern is approximately 70% from within Australia and 30% from South East Asia (Hong Kong, Malaysia and Singapore) with a sprinkling of candidates from Europe and other locations.

- Formal evaluation of materials occurs as part of an annual development cycle.

Deakin Australia's education and training programs have used computers extensively for many years: computer-managed learning has underpinned the Technology Management course undertaken by students from corporate and government clients, and computer-aided learning on computer disk has formed part of the distance learning materials distributed to candidates undertaking the ASCPA's CPA Program.

In 1995, Deakin Australia introduced 'Deakinet' into the CPA Program. Deakinet gave candidates access to the Deakin University electronic network which provided email access to and from candidates, tutors and other education staff of the ASCPA, as well as access between candidates. Candidates were also invited to subscribe to discussion groups based on their subject enrolments.

Candidates were required to provide their own personal computer and a suitable modem. Deakin Australia provided the necessary software and documentation on connecting the modem, installing the software and logging into Deakinet.

The Deakinet Experience

The rationale behind the introduction of Deakinet was to reinforce the motivation of candidates to participate fully in the study programs and, importantly, to facilitate candidates' maintaining a regular study pattern through the semester program.

The ASCPA Deakinet service included a schedule of weekly study questions for consideration and subsequent discussion. Each subject area was moderated by a member of the ASCPA's education staff.

It was hoped that adding email to the existing ASCPA candidate support network (telephone and fax contact, and face-to-face workshops conducted in the main urban centres in Australia and South East Asia) would produce the positive outcomes reported in case studies of other distance education online study groups. For example, see [Blantern 1992], [McConnell 1991], [Paulsen 1991] and [Steeples et al. 1996].

The Deakinet experience was disappointing. ASCPA study group numbers were abysmally low (less than 3% of enrolments in the CPA Program itself) and there was virtually no discussion traffic in response to the set question topics and no discussion topics generated by the candidates themselves.

The low participation rate was due to a combination of limited access to a personal computer and/or modem (modem access was 26% in 1995, 28% in 1996 and 49% in 1997) and a serious shortage of discretionary time available to candidates contending with full-time employment, part-time study and the usual range of family and related commitments. Of those who did register to participate in Deakinet, many reported technical problems connecting modems and in logging into the network.

The pattern of enrolment in Deakinet and the level of participation by ASCPA candidates did not improve after the initial semester program and Deakinet was withdrawn during 1996 and replaced by a limited information service provided on a WWW page, to which candidates must arrange their own access. Use of the CPA Program information service continues to be low.

CMC: The Hype and the Reality

The professional literature discusses the educational functions able to be fulfilled by CMC. For instance, [Chacon 1992] extends Kaye's essential characteristics of CMC into a table of pedagogical functions of the Communication Mode (CM).

From written medium
- learning verbal information
- development of expression
- developing skills for analysis and syntheses of text

From group interaction and co-operation
- motivational support of distance students
- development of critical judgement
- participative problem-solving
- opportunity for incidental learning

From audiovisual medium (developing feature of CM)
- added motivational strength
- substitutive of direct experience
- presentation of abstract knowledge

It appears that CMC is able to offer teaching options across the spectrum of strategies employed in face-to-face and resource-based distance education program settings. Chacon observes that 'the quality of service delivered by computers does not depend as much on their technological sophistication as on their relations to users and other media. Within a given user mode, the corresponding pedagogical functions may be accomplished as well by the "low end" of "cheap" media as by the more sophisticated ... This conclusion has enormous importance for distance education programs, concerned as they are with equal opportunity of access.'

Not surprisingly, educational providers are 'going online' at a great rate of knots. Many institutions appear to be making productive use of CMC. Numerous 'virtual universities' are offering educational programs via the Internet. The bandwagon of online education is gathering momentum.

The Deakin Australia experience with Deakinet has led to a more restrained view of the potential role of CMC in continuing professional education. There is no doubt that CMC does add to the armoury of distance (and face-to-face) education instructional strategies. However, the practicality of these strategies needs to be assessed in relation to the particular instructional circumstances. In the case of the CPA Program, the 1995 cohort of candidates with access to modem links was too small to permit development of a vigorous online discourse. While the 1998 cohort is certainly much larger, the problem of a shortage of study time remains. CPA Program candidates make pragmatic judgements about how their scarce study time is best allocated. Program evaluations suggest that the printed study manual is regarded as the primary resource and that other support resources must be demonstrated to add value as effective means of examination preparation before they will be embraced.

The Future of CMC in Deakin Australia Programs

Considering the range of services that is potentially available through CMC in relation to the needs of CPA Program candidates, the following observations may be made:

- An opportunity for dialogue with education staff of the ASCPA and other CPA Program candidates would be valuable.

- Such dialogue would be likely to be oriented to supporting segment study manuals and other segment study resources.

- CMC dialogue may be preferred by some candidates (over present phone and fax services) because of costs involved and for the reasons explored by [Mason 1989], that is, CMC is not seen as being as intrusive on tutors and fellow students as telephone queries and enables students to ask questions at the time an issue arises rather than during office or other specified hours of contact.

- Activities which proposed collaboration between candidates to build knowledge and explore academic points of interest within study programs would be bound to fail because of the shortage of study time available to candidates.

- Any move to introduce techniques and services which involved CMC becoming a primary teaching medium would raise serious problems of access and equity.

- Widespread use of discussion groups and other techniques which involved close moderation of small groups by tutors would impose huge administrative and logistical problems and would be untenable.

- Applications which relied on candidates storing and reviewing copious text files would not be popular. Candidates maintain that there is already too much to read in segment programs.

- Applications which reinforced a regular reference to the segment study program and encouraged candidates to pace their study evenly through the semester would be a useful timetabling and planning aid.

- In addition to enrolled CPA Program candidates, it would be desirable to make Program information available to potential candidates.

- Applications which promote 'examination readiness' are likely to be popular.

- An update service which provided succinct details of legislative and regulatory changes etc. and other current developments in the segment study discipline would promote candidate interest in the use of CMC within the study program.

Deakin Australia is continuing to explore uses of online communication in continuing professional education. A range of options is being considered to build on the present restricted use of CMC within the CPA Program based on the above observations, the theoretical considerations of CMC discussed earlier in the paper and Deakin Australia's experience with Deakinet. These options, to be offered via WWW pages and associated email links, fall broadly into three categories of CMC activity - an information service, an update service and a tutorial service.

Information service

Information to intending enrollees (and the world at large). Components of the service are presently in place and include:

- CPA Program handbook (pre-requisites for enrolment in CPA Program, CPA Program objectives, segment outlines and objectives etc.)
- Weekly study schedule
- Examiners' reports
- CPA Program enrolment form

Update service

CPA Program updates

- Administrative notices, reminders
- Errata sheets
- Legislative changes, information on new standards and other accounting document releases

Stop press

- Informal information exchange (eg. job vacancies, other items of general interest)
- Notice of topical information (eg. newspaper and journal articles, visiting speakers, seminars etc.)

Tutorial service

Weekly study commentary

- Brief comment or elucidation of some aspect of the segment study program (eg. review question, case study, diagram, reading, CBE program feature, audio cassette discussion etc.) to reinforce the sense of a timetable for regular progress through the segment study guide and to help to integrate the various resources making up the study program. Candidates could be invited to submit questions or make comments on the tutorial entries.

- Examination review (to include practice questions and commentary, candidate queries and other responses to be invited)

Symposium series

- Two or three sessions of dialogue (over the 12- to 14-week semester) involving exchanges between subject experts on some important or difficult segment topic, each could run over one or two weeks.
- Candidate questions/comments would be invited.

Seminar series

- Simulation of face-to-face workshops or seminars in which presenters outline given topic areas within segment study programs.
- Topics to be selected such that scope of presentation, while broader than the planned weekly study commentaries, is confined to discrete, logistically manageable study units.
- Presentation to consist of audio commentary and accompanying graphics and a limited use of text to reinforce and summarise key issues.
- Candidates to be invited to submit email queries and comments.

Segment knowledge base

- Database containing additional information on segment study program (eg. points arising from segment workshops, questions and information arising from phone contact with candidates, links to relevant pages on WWW and any other sundry segment intelligence).

Chat service

- Invitation at nominated times for online chat with tutor and/or other segment specialists.
- This service would be run on a limited trial basis to assess the likely resource implications if offered as a standard feature throughout the CPA Program.

Conclusion

Having entered the domain of CMC and been disappointed with the initial outcome, Deakin Australia is reviewing its experience and devising an alternative online strategy.

The use of CMC in continuing professional education must recognise that significant barriers constrain the intended users. Access to basic equipment will be a problem for a sizeable minority of users for some time yet. Adoption of specific conferencing software in addition to use of the WWW will exclude other potential users. To be of benefit to those users possessing the required hardware and software, services provided through CMC must be perceived to add value within a narrowly focussed study framework. Accordingly, online techniques need to focus on simple applications which facilitate examination readiness (or promote mastery of specified skills outcomes) and economise on study time.

A further complicating factor for Deakin Australia is the large numbers to be catered for within client programs, particularly the CPA Program. Information and update services do not present a problem in this respect, and some of the tutorial activities may be designed to economise on co-ordinating/moderating input. However, trials of the proposed seminar and chat services will need to be closely scrutinised to assess the resource requirements of a wider application of these techniques.

CMC has the potential to powerfully enrich continuing professional education and other forms of distance education. [Carvin 1997] points out that CMC (through the WWW) is able to extend the scope of an education/training organisation in the roles of tutor, publishing house, forum and navigator. It remains to be seen whether this potential is realised across all of these roles or in a less balanced development.

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